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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,137	03/29/2004	Takeshi Suzuki	14225-044001 / F1040107US	5416
26211	7590	09/29/2005	EXAMINER	
FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			POTTER, ROY KARL	
			ART UNIT	PAPER NUMBER
			2822	

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,137	<b>Applicant(s)</b> SUZUKI ET AL.	
	<b>Examiner</b> Roy K. Potter	<b>Art Unit</b> 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9 is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☒ Claim(s) 2,4 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

Claims 1 – 9 are pending.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "the surface of the metal substrate exposed by partially removing the insulating layer" in lines 2 - 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirasawa et al.

Hirasawa et al., U.S. Patent No. 6351026 discloses a multilayered wiring structure and method of manufacturing the same. As shown in Figure 4, a metal substrate 501a has an insulating layer 502 on its surface. Conductive patterns 503 and

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505 are formed on the surface of the insulating layer 502. The semiconductor element 506 is fixed on the conductive pattern 505.

### ***Allowable Subject Matter***

Claims 2, 4, 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In regard to claim 2, the prior art does not teach or suggest that the conductive pattern connected to the metal substrate is connected to ground.

In regard to claim 4, the prior art does not teach a D-class amplifier.

In regard to claim 5, the prior art does not teach or suggest the recited capacitor for short-circuiting a portion of the conductive pattern.

Claims 6 – 9 are allowed.

The prior art does not teach or suggest the recited bridge circuit fixed onto the conductive pattern.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

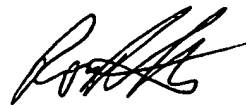
Ohkawa et al., U.S. Patent No. 5,321,299, discloses a hybrid integrated circuit device. As shown in prior art Figure 11, a device includes a metal substrate 80, which has insulating layers 82 and 84 on its surface. A conductive pattern 86 is located on the

insulating layers. A semiconductor element 70 is fixed on the conductive pattern 86. A contact portion for electrically connecting the conductive pattern 86 to the metal substrate 80 by wire 88 is shown in the vicinity of the semiconductor element.

Koelle et al., U.S. Patent No. 6,373,705, disclose an electronic semiconductor module. As shown in Figure 3, a metal substrate 3 has an insulating layer 2 on its surface. A conductive pattern 4 is formed on the surface of the insulating layer 2. A semiconductor element 20 is fixed on the conductive pattern 4. The semiconductor element 20 is connected to substrate 3 by wire 12. Koelle et al. does not disclose that the pattern 4 is electrically connected to the substrate 3.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roy K. Potter whose telephone number is 571 272 1842. The examiner can normally be reached on M-F.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Roy K Potter  
Primary Examiner  
Art Unit 2822